

State of California

DEPARTMENT OF WATER RESOURCES

The Resources Agency

OFFICE MEMO

TO: Karl P. Winkler
Dennis Lett
Bill Bennett

DATE: May 5, 1998

FROM: Jim Martin
Bud Thrapp
Ed Morris
Bob Nozuka

SUBJECT: CALFED Bay Delta Comments
SCH96032083 EIS/EIR

DRAFT

Central District (CD) is pleased to have the opportunity to comment on the CALFED Bay Delta Program Programmatic EIS/EIR. We have reviewed the subject environmental document, selected technical appendices, and submit the following comments:

General Comments

The CD is supportive of the CALFED effort and will continue to provide information and support activities for good decision making. Some of the topics covered in the District's review include Delta vulnerability, monitoring, land use, watershed management, long-term levee protection, water use efficiency, and water quality.

Delta Vulnerability

A primary objective of the CALFED program is to properly deal with the vulnerability of Delta functions, such as, Delta Levee protection. It would be beneficial if the report would appropriately describe the immediate attention that is needed now and on a continuing basis to protect the levees. Until a Delta solution is operational, the report should recognize the existing Delta, with its complex levee system as the Delta solution which must be protected. The present system is also significant since it establishes baseline environmental and hydraulic information that allow performance measurements of future solutions. Levee failures could jeopardize existing assessment. It could be advantageous to describe present Delta Protection activities as a first phase of the solution. District programs are being administered that support this solution along with active measures to define long-term USCE involvement. The challenges of protecting these levees can not be underestimated as evidenced by major recent flood challenges of 1997 and 1998. Com
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Monitoring/GIS

Implementation strategy requires additional attention to specific tools that are needed to provide good decisions. Foundational information requires proper data collection and electronic data management and storage. The Department of Water Resources (DWR) and its district offices are engaged in comprehensive efforts to collect and expand data programs to provide for accurate water management decisions and CALFED adaptive management could identify interrelationships to Delta planning support. In addition, DWR's advanced work on Geographic Information Systems

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could be identified for future work elements to support an implementation strategy. A specifically designed work element of a detailed monitoring program needs development to establish baseline conditions for understanding matters within the geographic scope of problem and distribution areas. This is critical to understanding primary considerations of watershed management. Valuable data collected by the DWR's district offices is applicable for this function. Also work efforts that are more watershed specific are needed. In addition, watershed management requires detailed land use investigations and Department efforts should be incorporated into future phases in a manner to properly support CALFED. This work will lead to proper quantification of consequences in connection to surface water, groundwater, geology and soils, fisheries and aquatic ecosystems, vegetation and wildlife, agricultural resources, urban resources, recreational activity and energy and power production.

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Land use

DWR conducts land use surveys to determine present water demands and make projections of future needs. Data on agricultural, municipal and industrial land and water use is collected, analyzed and made available to the public. Information is available on crop acreage, urban land uses, agroclimatic data, per capital water use and total water demand. This information is needed for water management, adaptive management, watershed management, and restoration activities. This use is compatible with CALFED goals and objectives. This data needs to be updated by an agreed work element to accommodate accurate CALFED decisions.

CALFED recognizes the complexities and consequences that land conversions involve. This includes conflicts with local land use plans and loss of agricultural jobs and revenues in some areas. In order to mitigate and predict such effects, baseline land use data along with future land use projections will be needed. The DWR possesses the longest record of such data and the expertise to fulfill future CALFED needs.

Watershed Management

Implementation of a CALFED solution will require a watershed-based approach to data collection and planning at local and regional levels. Data requirements will include land use, surface and groundwater hydrology, and water quality. The data collection effort needs to incorporate the experience and historic data of DWR local assistance to watershed-based planning by local agencies that haven't the resources to study local options within the overall CALFED solution. Studies are needed to evaluate water demands and supplies and explore alternatives including regional solutions, such as water transfers and conjunctive use. DWR's district offices require identification and support to provide data collection and planning assistance. This data collection requires prompt initiation to capture baseline data and afford an opportunity for adaptive management.

DWR's district offices are involved with watershed groups that have been working with government agencies at the local and federal levels. The Department is working with many State and federal environmental agencies who now see community-based environmental protection as a much more effective way of addressing environmental issues.

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Current water quality regulatory programs to implement the Safe Drinking Water Act source water protection programs and Clean Water Act non-point source pollution control programs are based on watershed and sub-watershed units. A partial list of targeted watersheds is presented in DWR's California Water Plan Update, draft Bulletin 160-98.

Long-Term Levee Protection Plan

Delta levees are continuously in danger of failure and require the attention of a well funded and organized program. Consistent with the CALFED phased planning, the existing Delta geometry is needed as the primary Delta water conveyance and transfer facility until a long-term solution is constructed. The current Delta Flood Protection Act AB 360 mandates the California Departments of Water Resources and Fish and Game administer a historically successful Delta levee maintenance program including CALFED related habitat improvements. The program also provides emergency supplies and rapid response teams to assure Delta levees do not fail during levee threatening high water events. The report should more completely identify the importance of this program to the CALFED process and the need for future program funding.

Document recognition of the habitat improvement advancements that are a part of the DWR/DFG AB 360 Levee Program would identify present feasible ecological restoration efforts. These restoration efforts compliment the CALFED process and meet the primary objectives of the CALFED program. Proper attention given to this program will avoid a deleterious effect to future program performance. Levee failures could have dramatic adverse effects to project operations and future CALFED planning continuity.

Water Use Efficiency

Technical and planning assistance will be required to help water utilities, water districts, farmers, and the public fulfill CALFED solution goals for water use efficiency. In order to meet the stated CALFED objectives structured programs relying on historical data, new data, and good science will need to be created and funded.

The CALFED Water Use Efficiency Component document builds on the AB 3616 Memorandum of Understanding Regarding Efficient Water Management Practices By Agricultural Suppliers in California. The CALFED solution accelerates the AB 3616 MOU's Agriculture Water Management Council endorsement requirements. To accomplish this accelerated requirement agricultural water districts are going to need technical assistance and the Council will need help to technically review the submitted water plans. DWR can provide the needed expertise but will need a dedicated program to satisfy this objective.

The CALFED alternative requires obtaining on farm efficiencies of 85% and irrigation distribution uniformity's of 90%. To move towards this goal will require DWR technical assistance programs for both farmers and water districts. Programs with adequate funding and technical expertise need to be in place to assist in advancing these goals.

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As water purveyors and individuals increase their efficiencies, it is stated in the CALFED report that "new water" can be used for water transfers. To determine if "new water" has been produced will require in-depth studies. Many factors have to be considered to make such determinations. Has water only been moved from one place to another, e.g. recoverable water moving from groundwater to surface water? Measurement of water delivered to each agricultural field, as stated in the CALFED solution, will require detailed water balances be performed to determine if water has actually been saved. More detailed studies may need to be conducted to separate recoverable from irrecoverable water. The report states that "new water" will be made available to agencies complying with CALFED solutions. CD has been responsible for determining real water for water transfers within the Delta and our 24 counties where water is wheeled through SWP. The "new water" will have to be separated out from the water saved by CUWCC or AB 3616. New evapotranspiration studies, especially in the Delta, will need to be performed to determine more accurate crop water use. The questions raised by some of the CALFED solutions will require detailed modeling using scientific methods based on good new and historical data. DWR's historical land use and water use data and technical staff can provide much of what may be needed to implement the CALFED solutions regarding the above elements of the plan.

Document information shows considerable reductions of water use in the Sacramento Region. In various areas, "over applied" water is shown to support wildlife habitat and may support endangered species. Investigations of the impacts of removing this water will need to be conducted to assure that habitat is not harmed by increased efficiencies.

Supplement B proposes an interesting approach to land fallowing. Such a program will require knowledge of recent and historic land use and monitoring of program conditions. A method to insure that crops are not moved from one area to another, resulting in no real water savings, will also have to be addressed. Again, such a program will require historic and land use surveys.

Water Quality

The District can provide needed technical information for the development and implementation of study plans for water quality and/or hazardous materials assessment. Available assistance includes sampling plan development; sampling equipment selection, design, fabrication, and use; field instrumentation; Quality Assurance/Quality control; and personnel training.

The report outlines the need for an in depth water quality monitoring program and a data management program for both the Delta and associated watersheds. The Department has historically furnished the technical expertise, the advance monitoring equipment and personnel to provide this information and service. Some of the CD's current programs are directly applicable to the requirements identified in the CALFED Water Quality Technical Appendix.

This document identifies a general plan to address various water quality issues. Details on how to accomplish the goals will involve a compliance monitoring effort employing sophisticated equipment and a comprehensive field program. An expanded program with the Department's district offices should be identified to support this matter.

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Specific Comments on Long-Term Levee Protection

Page 6, the attached table, Historic Inundation of Delta Islands, should be included in this report to provide the frequency of specific island flooding.

Page 10 and C-6, The CALFED Implementation Strategy and Decision Process for Special Projects should specify that it will be consistent with the mandates of AB 360, Delta Flood Protection, authorized until July 1, 2006, and the Amendment to the Multi-agency Agreement, November 27, 1997.

Specific Comments on Water Quality

Page 8, Table 1: CD is presently monitoring DO, salinity, temperature, standard minerals, and standard nutrients on a continuous, monthly or semi-annual basis in the Delta and in the major rivers flowing into the Delta. These programs can be expanded to include some or all of the additional parameters required to assist in meeting CALFED objectives. The water quality information we are gathering is being entered into our Water Data Information System database.

Page 15, ACTION 3: CD is currently conducting standard mineral sampling in parts of the Delta and can expand our testing to include other areas in connection with an identified program to advance CALFED measures.

Page 15, ACTION 4: CD has recently purchased an acoustic doppler river profiling instrument to determine flow velocities in channels. This instrument coupled with our sounder and GPS allows us to easily and quickly determine deposition/scour and velocity fluctuations at urban and industrial runoff sites. This equipment and district expertise is available to conduct water column and sediment sampling.

Page 17, ACTION 2: CD is conducting weekly DO monitoring at 10 sites in the South Delta when the temporary barriers are operating. The District has also established two sites where multi-parameter water quality instruments are continuously monitoring DO, pH, EC, temperature and turbidity during barrier operation. The District can expand the water quality monitoring network to chart the progress of source control of municipal and industrial wastewater discharges to assist with the CALFED effort.

Pages 26, ACTION 2: CD has the equipment, expertise, and experience to conduct tidal cycles to monitor and verify changes in circulation patterns in the Delta due to inflow and outflow changes. The network of EC stations in the Delta can verify improvements in salinity levels due to the flow pattern changes. The District database of tide and EC fluctuations in the Delta for the past 15 to 20 years allows review of historical data as a reference for computer simulation runs.

Pages 29 to 34, Table 2: CD is presently conducting monthly, or semi-annual water quality sampling for standard minerals for: Napa River, Sonoma Creek, Delta Waterways, Lower American River, Cache Creek, Feather River, Sacramento River, Lower Mokelumne River, San Joaquin

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River, and Lower Stanislaus River. The District can expand testing program to include sampling for nutrients, organics or other analytes.

Specific Comments on Phase II Interim Report

Page iv: Various references are made to the 14 Phase II documents. The program sketch on Page iv shows many more separate documents. It would be helpful to have a full listing of all applicable documents.

Page 19: The graph may be improved. Does the 25 year projected range of U/A/E demands only vary by one MAF? Does the difference between supply and demand represent shortages, and do shortages actually decrease with increasing conservation and recycling? Is this graph applicable to both the "with surface storage", and "without surface storage", alternatives.

Page 86: Under Alternative 3, add "Version I" as noted on chart page 78, and top line this page. At mid-page, change 6 MAF to 645 to be consistent with maximum noted in other text and chart on page 78.

Page 100: Top paragraph discusses buried pipeline. Suggest adding that surplus material from pipeline excavation can be used for levee structural reinforcement, widening, or raising. Next to bottom paragraph discusses "right-of-way". Suggest adding that land above pipeline could be leased for ag or other non-structural use.

Page 101: Middle paragraph discusses Alternative 3e. Per chart on page 78, add Alternative 3i.

Page 105: Next to last line, change 6 MAF to 6.45 MAF.

Page 111: Graphs on page 111 show X2 measurements from some point. Identify ordinate measurement point.

Page 124: Clarify table storage line 1 "Sacramento River Tributary (or Offstream) Surface Storage", and change 0 to 2 maf to "0 to 3 MAF". Also add line for "San Joaquin River Surface Storage 0 to 500 TAF, and check totals with table on page 78, and "Project Alternatives" totals.

Page 163 et. seq.: Consider coordinating or clarifying storage types (upstream, downstream, offstream, south of Delta, off aqueduct, in-Delta, etc). Terms "I/E Ratio", "ERP", and "ERPP" appear many places, and they should be included in the Glossary.

Specific Comments on Project Alternatives

Page 5: Figure I, Alternatives Matrix, does not agree with Phase II, Interim Report, chart on page 78. Programs, storage, and conveyance elements differ. Checked (x) boxes also differ on some alternatives.

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Page 26: Line 5, change "one variation" to "Alternative 1C."

Page 34: Under Tributary Storage (Sacramento River System), 2nd bullet, clarify that 5000 cfs assumed diversion represents a "new river diversion", and does not include existing diversions, which could be additive. Suggest change "Aqueduct Storage" to "Off Aqueduct Storage" for consistency. Also it may be advisable to note that the "off aqueduct storage" includes pump-storage capability. These two comments apply to many document locations.

Page 35: Clarify if ERP synonymous with ERPP.

Page 41: Line 1 makes reference to the "four programs". Clarify if this refers to the "six common" programs discussed in the Phase II Interim Report.